

REMARKS

STATUS OF THE CLAIMS

Claims 1, 4-8, and 11-22 are presently pending. Claims 1 and 8 have been amended to further define the additive concentrate and composition, respectively. Claim 13 has been amended to correct a typographical error. By this Amendment, no new matter has been added.

Applicants thank the Examiner for entering the after-final amendment filed March 13, 2007, and for withdrawing the double patenting rejection.

A. REJECTION UNDER 35 U.S.C. §112

The Examiner has rejected claim 13 under 35 U.S.C. §112, second paragraph, because claim 13, which depends on claim 8, recites that the composition comprises a major amount of "diluent oil" while claim 8 recites that the composition comprises "base oil." As the Examiner correctly noted on page 2 of the Office Action, claim 13 should recite "base oil." Claim 13 has been amended to correct this typographical error. Applicants respectfully request reconsideration and withdrawal of the rejection.

B. REJECTIONS UNDER 35 U.S.C. §103

1. U.S. Patent Application No. 2002/0119895 in view of U.S. Patent No. 4,755,311 and STN structure

The Examiner has rejected claims 1, 4-5, 7-8, and 11-20 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application No. 2002/0119895 to Cook et al. ("Cook") in view of U.S. Patent No. 4,755,311 to Burjes et al. ("Burjes") and STN structure. See page 3 of the Office Action. Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness. In particular, the

Examiner has failed to establish that the combination of references provides adequate motivation to pick and choose all of the claimed elements with a reasonable expectation of success.

The Examiner has argued that *Cook* allegedly discloses a composition used as gear lubricant and in turbines wherein the composition comprises "polysulfide or sulfurized olefin, dithiocarbamate, i.e., friction modifier, and amine salt of monothiophosphoric acid wherein the amine includes N-oleyl-1,3-diaminopropane and which corresponds to the presently claimed combination of hydrocarbylamine and alkylphosphoro(mono)thioate." See *id.* The Examiner has further relied on the *STN* structure and argued that N-oleyl-1,3-diaminopropane is equivalent to N-oleyl trimethylene diamine, as presently claimed. The Examiner has then pointed to *Burjes* for disclosing monothiophosphoric acids, and further notes that *Cook* discloses particular ranges for polysulfide or sulfurized olefin (0.5-5%) and amine salt of monothiophosphoric acid (0.1-10%). Therefore, the Examiner has concluded that "in light of the overlap between the claimed concentrate or lubricant and the concentrate or lubricant disclosed by *Cook*, it is urged that it would have been within the bounds of routine experimentation, as well as the skill level of one of ordinary skill in the art to use the concentrate or lubricant" disclosed by *Cook* and thereby arrive at the claimed invention. See pages 3-4 of the Office Action. Applicants strongly disagree for at least the reasons below.

To select the presently claimed elements, one skilled in the art considering *Cook* must find motivation to make a series of specific choices. For example, one skilled in the art considering *Cook's* disclosure as a whole would need to first choose a

thiophosphorus acid ester salt over a thiophosphorus acid ester (see para. [0121]), then choose a monothiophosphoric acid over a phosphorodithioic acid (see paras. [0122] and [0123]), then select an amine compound over a metallic base (see para. [0128]), then select a polyamine over a monoamine (see paras. [0129] to [0140]), and then specifically choose N-oley-1,3-diaminopropane (see para. [0141]), in addition to N-tallow-1,3-diaminopropane and N-coco-1,3-diaminopropane, to arrive at the load carrying capacity enhancing combination (b). Such unguided selections fail to provide adequate motivation to pick and choose all of the claimed elements with a reasonable expectation of success. Therefore, *Cook* does not teach or suggest the claimed load carrying capacity enhancing combination.

Moreover, one of ordinary skill in the art would then have to combine that load carrying capacity enhancing combination with an extreme pressure compound comprising a sulfur-containing compound, a friction modifying compound, and a diluent oil or base oil, in order to arrive at the presently claimed invention. The Examiner has failed to point to the specific teachings or suggestions in *Cook* that would have motivated one of ordinary skill in the art to make such selections. In essence, the Examiner has used applicant's own application and relied upon impermissible hindsight to construct her rejection. See *In re Wesslau*, 147 USPQ 391, 393 (CCPA 1965) (holding "[i]t is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art").

Burjes does not overcome the deficiencies of *Cook*. In particular, the Examiner relied on *Burjes*, a reference disclosed in *Cook*, for teaching specific types of monothiophosphoric acids. However, *Burjes* does not teach or suggest the claimed hydrocarbylamine compound (b)(i) or the claimed load carrying capacity enhancing combination (b). Moreover, *Burjes* also does not provide the requisite motivation to lead one of ordinary skill in the art to make the choices necessary to arrive at the presently claimed invention. For at least these reasons, the Examiner has failed to establish a *prima facie* case of obviousness.

Therefore, the Examiner has failed to establish a *prima facie* case of obviousness. Applicants respectfully request reconsideration and withdrawal of the rejection.

2. U.S. Patent No. 5,942,470 in view of *Cook* and *STN* structure

The Examiner has rejected claims 1, 4-8, and 11-20 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,942,470 to Norman et al. ("Norman") in view of *Cook* and *STN* structure. The Examiner has admitted that the difference between Norman and the presently claimed invention is the requirement in the claims of hydrocarbylamine b(i). See page 6 of the Office Action. However, the Examiner has argued that *Cook* overcomes the deficiency of *Norman* because *Cook* discloses the use of "fatty diamine such as N-oleyl-1,3-diaminopropane" to form "an amine salt of monothiophosphoric acid wherein the amine is obtained from fatty diamine such as N-oleyl-1,3-diaminopropane." See pages 6-7 of the Office Action. The Examiner has grossly mischaracterized the teachings of *Cook*.

Cook generically teaches extreme pressure agents, that extreme pressure agents can be monothiophosphates, that monothiophosphates can be made into a salt, that an amine can be used to make such a salt, and that N-oleyl-1,3-diaminopropane can be such an amine. However, *Cook* does not make the very specific teaching alleged by the Examiner.

As discussed above, *Cook* fails to provide adequate motivation to specifically pick and choose the presently claimed load carrying capacity enhancing combination comprising a hydrocarbylamine compound selected from the group consisting of N-oleyl-trimethylenediamine, N-tallow-trimethylenediamine, N-coco-trimethylenediamine, and combinations thereof. Furthermore, *Cook* also fails to provide specific teachings or suggestions to combine that load carrying capacity enhancing combination with an extreme pressure compound comprising a sulfur-containing compound, a friction modifying compound, and a diluent oil or base oil, in order for one skilled in the art to arrive at the presently claimed invention.

The Examiner has further argued that *Cook* allegedly discloses "the equivalence and interchangeability of using such fatty diamine, as presently claimed, with using alkyl amine as disclosed by *Norman*." See pages 6-7 of the Office Action. Applicants respectfully disagree. The "mere inclusion of several compounds. . . does not necessarily establish that each of those compounds is 'equivalent' to the others for all purposes." *In re Jezl*, 396 F.2d 1009, 1011 (C.C.P.A. 1968). One of ordinary skill in the art would understand that the hydrocarbyl group on the amine will provide different chemical properties to a resultant salt. These hydrocarbyl groups may affect the other components in the additive concentrate. Additionally, one skilled in the art would

understand that a fatty diamine has different chemical and reactive properties than a monoamine, such as the multitude of octylamines taught by *Norman* (see col. 4, line 27 to col. 9, line 67).

Because neither reference provides adequate motivation to select all the claimed components to arrive at the claimed invention, the references, alone or in combination, fail to teach or suggest the claimed invention. Applicants respectfully request reconsideration and withdrawal of the rejection.

3. U.S. Patent No. 4,710,100 in view of Cook

The Examiner has rejected claims 21-22 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,710,100 to Laing et al. ("*Laing*") in view of *Cook*. Applicants respectfully submit that claims 21 and 22 depend from independent claim 8 and are patentable for the same reasons as claim 8. Claim 8 has not been rejected over *Laing* in view of *Cook*.

The Examiner has argued that the difference between *Laing* and the present invention is the requirement in the present claims of specific composition. *Cook* does not overcome this deficiency of *Laing* because, as argued above, *Cook* fails to provide motivation sufficient for one skilled in the art to choose the claimed load carrying capacity enhancing combination (b).

For at least this reason, the combination of *Laing* and *Cook* does not teach or suggest all of the claimed elements. Applicants respectfully request reconsideration and withdrawal of the rejection.

CONCLUSION

In view of the foregoing amendment and remarks, applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 50-2961.

Respectfully submitted,

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By: Carol L. Cole
Carol L. Cole
Reg. No. 43,555